

CLAIMS

1. A method of treating cancer in a subject comprising administering to said subject a therapeutically effective amount of an anti-nucleolin agent and a pharmaceutically acceptable carrier.

2. The method of claim 1, further comprising administering to said subject a chemotoxic or chemotherapeutic agent.

3. The method of claim 1, further comprising treating said subject with radiation therapy.

4. The method of claim 2, wherein said chemotoxic or chemotherapeutic agent is selected from the group consisting of cyclophosphamide, etoposide, doxorubicin, methotrexate, vincristine, procabazine, prednizone, dexamethasone, tamoxifen citrate, carboplatin, cisplatin, oxaliplatin, 5-fluorouracil, camptothecin, zoledronic acid, Ibandronate and mytomycin.

5. A method of treating cancer in a subject, comprising administering to said subject a therapeutically effective amount of an anti-nucleolin antibody and a pharmaceutically acceptable carrier, wherein said nucleolin antibody is substantially non-immunogenic to human.

6. The method of claim 5, further comprising administering to said subject a chemotoxic or chemotherapeutic agent.

7. The method of claim 5, further comprising treating said subject with radiation therapy.

8. The method of claim 6 wherein said chemotoxic or chemotherapeutic agent is selected from the group consisting of cyclophosphamide, etoposide,

doxorubicin, methotrexate, vincristine, procabazine, prednizone, dexamethasone, tamoxifen citrate, carboplatin, cisplatin, oxaliplatin, 5-fluorouracil, camptothecin, zoledronic acid, Ibandronate and mytomycin.

5 9. A method of treating cancer in a subject comprising administering to said subject a therapeutically effective amount of an anti-nucleolin antibody, a chemotoxic or chemotherapeutic agent and a pharmaceutically acceptable carrier.

10 10. The method of claim 9, wherein said chemotoxic or chemotherapeutic agent is selected from the group consisting of cyclophosphamide, etoposide, doxorubicin, methotrexate, vincristine, procabazine, prednizone, dexamethasone, tamoxifen citrate, carboplatin, cisplatin, oxaliplatin, 5-fluorouracil, camptothecin, zoledronic acid, Ibandronate and mytomycin.

15 11. A method of treating cancer in a subject comprising administering to said subject a therapeutically effective amount of an anti-nucleolin antibody and a pharmaceutically acceptable carrier, and further treating said subject with radiation therapy.

20 12. A method of treating cancer, comprising administering a therapeutically effective amount of a duplex interfering RNA to nucleolin and a pharmaceutically acceptable carrier.

25 13. A method of treating a cancer patient, comprising administering to said patient a nucleolin anti-sense molecule which inhibits production of a nucleolin polypeptide.

30 14. A method of treating a cancer patient, comprising administering to said patient a nucleolin-interfering RNA molecule which inhibits expression of a nucleolin gene.

15. A pharmaceutical composition, comprising a pharmaceutically acceptable carrier and an anti-sense oligonucleotide directed against nucleolin.

5 16. A pharmaceutical composition, comprising a pharmaceutically acceptable carrier and an inhibitory RNA against nucleolin

17. A pharmaceutical composition, comprising a pharmaceutically acceptable carrier and a nucleolin antibody.